

23. The system of claim 22, wherein the processor module is further configured to control access of the database according to authorship of information in the database.

24. The method of claim 2, further comprising controlling access of the database according to authorship of information in the database.

REMARKS

A Petition For Extension of Time Under 37 CFR 1.136(a) and fee is enclosed.

At the time of the Office Action, claims 1-21 were pending. In the Office Action, the Examiner rejected claims 1-21. By amendment, claims 1, 2, 6, 7, 8, 9, 12, 18 and 21 have been amended, claim 5 has been canceled, and new claims 22-24 have been added. Therefore, claims 1-4, and 6-24 are before the Examiner for consideration. The amendments to claim 1, 2, 6, 7, 8, 9, 12, 18 and 21 are intended for lending greater specificity to the claimed subject matter and expediting prosecution to conclusion. Favorable consideration of the application and claims now presented is respectfully requested.

The Examiner has rejected claims 1 and 9 under 35 USC 103 as being unpatentable over Lavin et al. (U.S. Pat. No. 5,772,585) in view of Walker (U.S. Pat. No. 5,949,875). As discussed in greater detail below, the applicant believes that these patents, alone, or in combination, do not teach or suggest the present invention, and respectfully requests reconsideration of the application in light of the following comments.

The present invention is directed to a method and system that allows capture, storage, processing, communication, security, and, in particular, summarized presentation, or a "snapshot" of patient health information, such as via an Internet connection. In one form, the system and method allow identifying parameters in free form progress notes recorded by a physician or transcriptionist, such as diagnosis, treatment, and prescription parameters, for more efficient searching and review by users accessing a historical set of progress notes. In particular, the invention includes a browser driven extraction capability to extract information from free text progress notes and present the information in a summary form based on logical relationships. Specifically, a user is *not required* to store information in specific template or field. In another form, the invention allows tracking and billing of users accessing the patient health information, and allocates access fees among entities associated with the patient health information accessed. For example, if a primary physician and a specialist are both involved in

the treatment of a patient, the primary physician and the specialist may both receive a percentage of an access fee generated when a user accesses their patient's health information.

Accordingly, the applicants have amended claim 1 to further specify the operational relationship of "a server configured to allow web-enabled, data sharing access by authorized users using a local or remote web-enabled device." While the Examiner cites Lavin as disclosing a "server configured to allow access to the stored database by authorized users," Lavin does not appear to teach "data sharing" using "web enabled devices." Rather, Lavin appears to be directed to an isolated local area network (LAN) for managing medical information in a doctor's office or medical clinic. See, for example, Lavin, Column 4, lines 1, 8-10, and 35-50. Significantly, Lavin appears to lack any reference to access by users outside a clinic or doctor's office, or web-enabled access either locally or remotely. Consequently, by only disclosing intraoffice access by physicians and authorized personnel within the office, Lavin appears to teach away from providing "data sharing, web-enabled access by authorized users using a local or remote web-enabled device."

Furthermore, with regard to the Examiner's statement that Lavin discloses an [extraction] module operable to extract a patient's medical diagnosis and treatment from respective progress notes, it appears that the Examiner may have misunderstood what the Lavin reference teaches. Specifically, Lavin does not appear to disclose "a module to extract a patients' medical diagnosis and treatment information *from* respective progress notes." Rather, it is believed Lavin merely refers to recording and storing progress note entries in predefined templates or fields during or after an examination by a health care provider. See, for example, Lavin, Column 9, lines 23-25. The mere act of recording progress notes in predefined templates or fields is different from browsing free text progress notes to "extract a patient's medical diagnosis and treatment information," such as for the purpose of providing summary information for review of historical progress notes. Accordingly, because Lavin appears to lack any reference to "web-enabled data sharing" or "extracting diagnosis and treatment information from progress notes," the applicant submits that Lavin does not teach or suggest applicant's invention as set forth in claim 1.

With regard to the Walker reference, the Examiner states that Walker discloses a "processor module configured to track users accessing the data based and to bill the accessing users." However, the applicant has amended claim 1 to delete the feature of a "processor module configured to track users accessing the data based and to bill the accessing users." Accordingly, the applicant submits that the Walker reference is not a valid reference for claim 1.

Thus, for the above-cited reasons, applicant respectfully submits that claim 1 is in condition for allowance.

Regarding the Examiner's rejection of claim 9, the applicant has amended claim 9 to include the operational relationship of "allocating fees among entities associated with the respective information accessed by respective users." While the Examiner states that Lavin does not explicitly disclose a "processor module configured to track users accessing the data base and to bill the accessing users," the Examiner cites Walker as suggesting this operational relationship. However, Walker does not appear to teach or suggest "allocating fees among entities associated with the respective medical diagnosis and treatment information" as in amended claim 9. Rather, Walker is believed to be limited to implementation of a 900 number network billing system based on using codes to access databases via a 900 number. See, for example, Walker, Column 4, lines 59-63. Walker appears to any lack reference to "allocating fees" according to a chain of ownership of "medical diagnosis and treatment information" so that multiple owners of the information are appropriately credited. Accordingly, the applicant submits that the Walker reference does not teach or suggest the applicant's invention as set forth in the claim 9. Therefore, because neither Lavin nor Walker, alone or in combination, teach or suggest a "medical record storage and retrieval system" including the features of claim 9, the applicant submits that it would not have been obvious to combine the features of Walker within the system of Lavin. Thus, for the above-cited reasons, applicant respectfully submits that claim 9 is in condition for allowance.

The Examiner has rejected claims 2-8 and 10-21 under 35 USC 103 as being unpatentable over Lavin et al. (U.S. Pat. No. 5,772,585) in view of Evans (U.S. Pat. No. 6,347,329). While the Examiner cites Lavin as disclosing "identifying on said progress note respective parameters" and "storing said progress notes with said identified parameters," Lavin, as discussed above with regard to claim 1, does not appear to teach or suggest "identifying" or "storing...parameters" related to the progress notes. Rather, Lavin is believed to merely refer to recording progress notes during or after an examination by a health care provider. See, for example, Lavin, Column 9, lines 23-25. The mere act of recording progress notes is different from "identifying ...parameters" on progress notes and "storing said progress notes with said identified parameters." Accordingly, the applicant submits that Lavin does not teach or suggest applicant's invention as set forth in claim 2.

With regard to the Evans reference, the applicant has amended claim 2 to further specify the operational relationship of "populating said database with respective progress notes and respective identified parameters resulting from further encounters between the respective

patient and any respective physician so as to create a historical set of progress notes with identified parameters for that respective patient, wherein the set of historical progress notes is interconnectable based on one or more logic operators." Significantly, this allows the invention to link identified parameters and provide pertinent medical information extracted from historical progress notes based on a selection of logical operators, such as a chronology-indicative operator, a pathology-indicative operator, or a pharmacology-indicative operator. While the Examiner states that Lavin does not explicitly disclose "populating said database with respective progress notes ... to create a historical set of progress notes," the Examiner cites Evans as suggesting this operational relationship. However, Evans does not appear to teach or suggest a "historical set of progress notes [with identified parameters] is interconnectable based on one or more logic operators." Rather, it is believed that Evans merely discloses a data structure with pointers for storing patient information based on a patient identifier (PID). See, for example, Evans, Column 8, lines 35-65. The applicant submits that the data structure as disclosed in Evans is believed to be different from "identifying on said progress notes parameters...wherein the set of historical progress notes is interconnectable based on one or more logic operators." Unlike a simple data structure, the present invention allows selected information contained in sets of historical progress notes to be logically connected, so that related information can be extracted from the notes, thereby allowing summaries, or "snapshots" of the historical progress notes to be generated based on a selection of a logic operator. It is believed this feature is lacking in the simple data structure of Evans. Thus, for the above-cited reasons, applicant respectfully submits that claim 2 is in condition for allowance.

Claim 3 depends from claim 2. Accordingly, claim 3 incorporates all the elements of claim 2. As described above, neither Lavin nor Evans, alone or in combination, are valid references since neither Lavin nor Evans teach or suggest a "historical set of progress notes with identified parameters..., wherein the set of historical progress notes is interconnectable based on one or more logic operators." Consequently, with regard to the Examiner's rejection of claim 3, applicant respectfully submits that the combination taught by claim 2 and dependent claim 3 is not taught in the prior art of record. In addition, applicant respectfully submits that "identified parameters are selected to convey a snapshot of said encounter" is not disclosed or suggested in either Lavin or Evans, alone or in combination. Accordingly, neither claim 3 standing alone, nor the combination disclosed in claims 2 in conjunction with claim 3 appear to be disclosed in the prior art of record. Therefore, dependent claim 3 is believed to be in condition for allowance.

Claim 4 depends from claim 2. Accordingly, claim 4 incorporates all the elements of claim 2. As described above, neither Lavin nor Evans, alone or in combination, are valid references since neither Lavin nor Evans teach or suggest a "historical set of progress notes with identified parameters ..., wherein the set of historical progress notes is interconnectable based on one or more logic operators." Consequently, with regard to the Examiner's rejection of claim 4, applicant respectfully submits that the combination taught by claim 2 and dependent claim 4 is not taught in the prior art of record. In addition, applicant respectfully submits that "identified parameters are selected from the group consisting of diagnosis and prescription parameters" is not disclosed or suggested in either Lavin or Evans, alone or in combination. Accordingly, neither claim 4 standing alone, nor the combination disclosed in claims 2 in conjunction with claim 4 appear to be disclosed in the prior art of record. Therefore, dependent claim 4 is believed to be in condition for allowance.

Amended claim 6 depends from claim 2. Accordingly, claim 6 incorporates all the elements of claim 2. As described above, neither Lavin nor Evans, alone or in combination, are valid references since neither Lavin nor Evans teach or suggest a "historical set of progress notes with identified parameters ..., wherein the set of historical progress notes is interconnectable based on one or more logic operators." Consequently, with regard to the Examiner's rejection of claim 6, applicant respectfully submits that the combination taught by claim 2 and dependent claim 6 is not taught in the prior art of record. In addition, applicant respectfully submits that "one of the logical operator comprises a chronology-indicative operator" is not disclosed or suggested in either Lavin or Evans, alone or in combination. Accordingly, neither claim 6 standing alone, nor the combination disclosed in claims 2 in conjunction with claim 6 appear to be disclosed in the prior art of record. Therefore, dependent claim 6 is believed to be in condition for allowance.

Amended claim 7 depends from claim 2. Accordingly, claim 7 incorporates all the elements of claim 2. As described above, neither Lavin nor Evans, alone or in combination, are valid references since neither Lavin nor Evans teach or suggest a "historical set of progress notes with identified parameters ..., wherein the set of historical progress notes is interconnectable based on one or more logic operators." Consequently, with regard to the Examiner's rejection of claim 7, applicant respectfully submits that the combination taught by claim 2 and dependent claim 7 is not taught in the prior art of record. In addition, applicant respectfully submits that "one of the logical operator comprises a pathology-indicative operator" is not disclosed or suggested in either Lavin or Evans, alone or in combination. Accordingly, neither claim 7 standing alone, nor the combination disclosed in claims 2 in conjunction with

claim 7, appear to be disclosed in the prior art of record. Therefore, dependent claim 7 is believed to be in condition for allowance.

Amended claim 8 depends from claim 2. Accordingly, claim 8 incorporates all the elements of claim 2. As described above, neither Lavin nor Evans, alone or in combination, are valid references since neither Lavin nor Evans teach or suggest a "historical set of progress notes with identified parameters ..., wherein the set of historical progress notes is interconnectable based on one or more logic operators." Consequently, with regard to the Examiner's rejection of claim 8, applicant respectfully submits that the combination taught by claim 2 and dependent claim 8 is not taught in the prior art of record. In addition, applicant respectfully submits that "one of the logical operator comprises a pharmacology-indicative operator" is not disclosed or suggested in either Lavin or Evans, alone or in combination. Accordingly, neither claim 8 standing alone, nor the combination disclosed in claims 2 in conjunction with claim 8, appear to be disclosed in the prior art of record. Therefore, dependent claim 8 is believed to be in condition for allowance.

Claim 10 depends from claim 2. Accordingly, claim 10 incorporates all the elements of claims 2. As described above, neither Lavin nor Evans, alone or in combination, are valid references since neither Lavin nor Evans teach or suggest a "historical set of progress notes with identified parameters ..., wherein the set of historical progress notes is interconnectable based on one or more logic operators." Consequently, with regard to the Examiner's rejection of claim 10, applicant respectfully submits that the combination taught by claim 2 and dependent claim 10 is not taught in the prior art of record. Therefore, dependent claim 10 is believed to be in condition for allowance.

Claim 11 depends from claim 10, which depends from claim 2. Accordingly, claim 11 incorporates all the elements of claims 2 and 10. As described above, neither Lavin nor Evans, alone or in combination, are valid references since neither Lavin nor Evans teach or suggest a "historical set of progress notes with identified parameters ..., wherein the set of historical progress notes is interconnectable based on one or more logic operators." Consequently, with regard to the Examiner's rejection of claim 11, applicant respectfully submits that the combination taught by claims 2, 10 and 11 is not taught in the prior art of record. Therefore, dependent claim 11 is believed to be in condition for allowance.

The Examiner has rejected claim 12 for the same reasons as described above with regard to the rejection of claims 1 and 2, stating that it is readily apparent from Lavin and Evans that the disclosed systems utilize program code to perform their specified function. For the same reasons provided above and incorporated herein regarding the Examiner's rejections of

claims 1 and 2, the applicant submits that the method encoded in computer program code on computer readable medium is not taught or suggested by Lavin or Evans, either alone or in combination. Accordingly, because the underlying method in the claimed computer readable medium is different from anything disclosed in Lavin or Evans, the applicant submits that the computer readable medium of claim 12 is believed to be in condition for allowance.

Claim 13 depends from claim 12. Accordingly, claim 13 incorporates all the elements of claim 12. For the reasons described above and incorporated herein with respect to the rejection of claim 2, neither Lavin nor Evans, alone or in combination, are valid references for the computer readable medium claim of claim 12 that embodies the method of claim 2. Consequently, with regard to the Examiner's rejection of claim 13, applicant respectfully submits that the combination taught by claim 12 and dependent claim 13 is not taught in the prior art of record. In addition, claim 13 incorporates the underlying process step of claim 3. For the same reasons given above with respect to the Examiner's rejection of claim 3, the applicant submits that the method encoded in computer program code on computer readable medium is not taught or suggested by Lavin or Evans, either alone or in combination. Therefore, dependent claim 13, incorporating the method of claim 3, is believed to be in condition for allowance.

Claim 14 depends from claim 12. Accordingly, claim 14 incorporates all the elements of claim 12. For the reasons described above and incorporated herein with respect to the rejection of claim 2, neither Lavin nor Evans, alone or in combination, are valid references for the computer readable medium of claim 12 that embodies the method of claim 2. Consequently, with regard to the Examiner's rejection of claim 14, applicant respectfully submits that the combination taught by claim 12 and dependent claim 14 is not taught in the prior art of record. In addition, claim 14 incorporates the underlying process step of claim 4. For the same reasons given above with respect to the Examiner's rejection of claim 4, the applicant submits that the method encoded in computer program code on computer readable medium is not taught or suggested by Lavin or Evans, either alone or in combination. Therefore, dependent claim 14, incorporating the method of claim 4, is believed to be in condition for allowance.

Claim 15 depends from claim 12. Accordingly, claim 15 incorporates all the elements of claim 12. For the reasons described above and incorporated herein with respect to the rejection of claim 2, neither Lavin nor Evans, alone or in combination, are valid references for the computer readable medium of claim 12 that embodies the method of claim 2. Consequently, with regard to the Examiner's rejection of claim 15, applicant respectfully submits that the combination taught by claim 12 and dependent claim 15 is not taught in the prior art of record. In addition, claim 15 incorporates the underlying process step of claim 6. For the same reasons

given above with respect to the Examiner's rejection of claim 6, the applicant submits that the method encoded in computer program code on computer readable medium is not taught or suggested by Lavin or Evans, either alone or in combination. Therefore, dependent claim 15, incorporating the method of claim 6, is believed to be in condition for allowance.

Claim 16 depends from claim 12. Accordingly, claim 16 incorporates all the elements of claim 12. For the reasons described above and incorporated herein with respect to the rejection of claim 2, neither Lavin nor Evans, alone or in combination, are valid references for the computer readable medium of claim 12 that embodies the method of claim 2. Consequently, with regard to the Examiner's rejection of claim 16, applicant respectfully submits that the combination taught by claim 12 and dependent claim 16 is not taught in the prior art of record. In addition, claim 16 incorporates the underlying process step of claim 7. For the same reasons given above with respect to the Examiner's rejection of claim 7, the applicant submits that the method encoded in computer program code on computer readable medium is not taught or suggested by Lavin or Evans, either alone or in combination. Therefore, dependent claim 16, incorporating the method of claim 7, is believed to be in condition for allowance.

Claim 17 depends from claim 12. Accordingly, claim 17 incorporates all the elements of claim 12. For the reasons described above and incorporated herein with respect to the rejection of claim 2, neither Lavin nor Evans, alone or in combination, are valid references for the computer readable medium of claim 12 that embodies the method of claim 2. Consequently, with regard to the Examiner's rejection of claim 17, applicant respectfully submits that the combination taught by claim 12 and dependent claim 17 is not taught in the prior art of record. In addition, claim 16 incorporates the underlying process step of claim 8. For the same reasons given above with respect to the Examiner's rejection of claim 8, the applicant submits that the method encoded in computer program code on computer readable medium is not taught or suggested by Lavin or Evans, either alone or in combination. Therefore, dependent claim 17, incorporating the method of claim 8, is believed to be in condition for allowance.

Claim 18 depends from claim 12. Accordingly, claim 18 incorporates all the elements of claim 12. For the reasons described above and incorporated herein with respect to the rejection of claim 2, neither Lavin nor Evans, alone or in combination, are valid references for the computer readable medium of claim 12 that embodies the method of claim 2. Consequently, with regard to the Examiner's rejection of claim 18, applicant respectfully submits that the combination taught by claim 12 and dependent claim 18 is not taught in the prior art of record. In addition, claim 18 incorporates the underlying process step of claim 9. For the same reasons given above with respect to the Examiner's rejection of claim 9, the applicant submits that the

method encoded in computer program code on computer readable medium is not taught or suggested by Lavin or Walker, either alone or in combination. Therefore, dependent claim 18, incorporating the method of claim 9, is believed to be in condition for allowance.

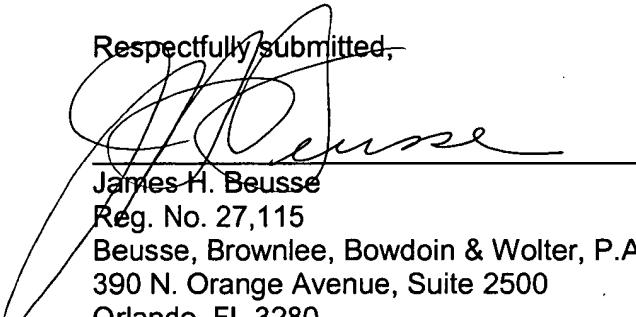
Claim 19 depends from claim 12. Accordingly, claim 19 incorporates all the elements of claim 12. For the reasons described above and incorporated herein with respect to the rejection of claim 2, neither Lavin nor Evans, alone or in combination, are valid references for the computer readable medium of claim 12 that embodies the method of claim 2. Consequently, with regard to the Examiner's rejection of claim 19, applicant respectfully submits that the combination taught by claim 12 and dependent claim 19 is not taught in the prior art of record. Therefore, dependent claim 19 is believed to be in condition for allowance.

Claim 20 depends from claim 19, which depends from claim 12. Accordingly, claim 20 incorporates all the elements of claims 19 and 12. For the reasons described above and incorporated herein with respect to the rejection of claim 2, neither Lavin nor Evans, alone or in combination, are valid references for the computer readable medium of claim 12 that embodies the method of claim 2. Consequently, with regard to the Examiner's rejection of claim 20, applicant respectfully submits that the combination taught by claim 12, 19 and 20 is not taught in the prior art of record. Therefore, dependent claim 20 is believed to be in condition for allowance.

The Examiner has rejected claim 21, stating that Lavin discloses means for storing extracted diagnosis and treatment in a logically connected database. However, for the same reasons given and incorporated herein with regard to the Examiner's rejection of claim 1 over Lavin with respect to the operational relationship of "extracting a patient's medical diagnosis and treatment information" and storing the extracted ... information," the applicant submits that Lavin does not teach or suggest the invention claimed in claim 21. With regard to the Examiner's rejection of claim 21 citing Walker as disclosing means for tracking users accessing the database and for billing the users for each access, the applicant has amended the claim to include "allocating fees among entities associated with the respective medical diagnosis and treatment information accessed by respective users." For the same reasons provided above and incorporated herein with respect to the Examiner's citation of Walker in claim 1, the applicant submits that the Walker reference does not teach or suggest the applicant's invention as set forth in claim 21. Finally, the Examiner has rejected the remainder of claim 21 for the same reasons given for the rejections in claims 1-2 and 12. Accordingly, for the same reasons provided and incorporated herein in response to the Examiner's rejection of claims 1-2 and 12, the applicant respectfully submits that claim 21 is in condition for allowance.

For all of the above reasons, applicant submits that the specification and claims are now in proper form, and that each claim defines patentable subject matter over the cited prior art. Therefore, applicant requests reconsideration of the application and early allowance of claims 1-4, and 6 -22 in light of the above remarks.

Respectfully submitted,



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Attachments: Marked-up Version of Claims

Version With Markings To Show Changes Made

Please substitute the following claims:

1. (Once Amended) A medical health record storage and retrieval system comprising:
an interface extraction module operable to extract a patient's diagnosis and treatment information from respective progress notes of a physician;
a storage module configured to store the extracted diagnosis and treatment information in a logically connected database; and
a server configured to allow web-enabled data sharing access to the stored database by authorized users using a remote or local web-enabled device; and
~~a processor module configured to track users accessing the database and to bill the accessing users for each access of the database.~~

- A1
2. (Once Amended) A computerized method for managing respective health records of a plurality of patients, said method comprising:
uploading a progress note of a respective patient, said progress note comprising data relative to an encounter between a respective physician and the respective patient;
identifying on said progress note respective parameters selectable by the respective physician;
storing said progress note with said identified parameters in a database accessible to a plurality of authorized users; and
populating said database with respective progress notes and respective identified parameters resulting from further encounters between the respective patient and any respective physician so as to create a historical set of progress notes with identified parameters for that respective patient, the set of historical progress notes being interconnectable based on one or more logic operators.

- A2
6. (Once Amended) The computerized method of claim 52, wherein one of the logical operators comprises a chronology-indicative operator.

7. (Once Amended) The computerized method of claim 52, wherein one of the logical operators comprises a pathology-indicative operator.

8. (Once Amended) The computerized method of claim 52, wherein one of the logical operators comprises a pharmacology-indicative operator.

A1
Contd

9. (Once Amended) The computerized method of claim 2 further comprising:
tracking users accessing information in the database to process respective billing of the
accessing users for each access of the database, and
allocating fees among entities associated with the respective information accessed by
respective users.

12. (Once Amended) A computer readable medium encoded with computer code for managing respective health records of a plurality of patients, the program code causing a computer to execute a method comprising:

uploading a progress note of a respective patient, said progress note comprising data relative to an encounter between a respective physician and the respective patient;
identifying on said progress note respective parameters selectable by the respective physician;
storing said progress note with said identified parameters in a database accessible to a plurality of authorized users; and
populating said database with respective progress notes and respective identified parameters resulting from further encounters between the respective patient and any respective physician so as to create a historical set of progress notes with identified parameters for that respective patient, the set of historical progress notes being interconnectable based on one or more logic operators.

18. (Once Amended) The computer readable medium of claim 12, further comprising:
tracking users accessing information in the database to process respective billing of the
accessing users for each access of the database, and
allocating fees among entities associated with the respective information accessed by
respective users.

21. (Once Amended) A medical health record storage and retrieval system comprising:
means for extracting a patient's diagnosis and treatment information from respective
progress notes of a physician;

means for storing the extracted diagnosis and treatment information in a logically connected database;

*A5
Contd*
means for allowing web-enabled data sharing access to the stored database by authorized users using a remote or local web-enabled device; and

means for tracking users accessing the database, and for billing the accessing users for each access of the database, and for allocating fees among entities associated with the respective medical diagnosis and treatment information accessed by respective users.

Please add the following new claims:

A6
22. The system of claim 1, further comprising a processor module configured to track users accessing the database, to bill the accessing users for each access of the database, and to allocate fees among entities associated with the respective medical diagnosis and treatment information accessed by respective users.

23. The system of claim 22, wherein the processor module is further configured to control access of the database according to authorship of information in the database.

24. The method of claim 2, further comprising controlling access of the database according to authorship of information in the database.